Annual Examination 2010 | **PHYSICS** | HYDERABAD BOARD

Time: 15 Minutes M. Marks: 15

Note: (1) Attempt all the questions. Each questions carries ONE mark.
(2) Do not copy down the part questions in your answer book.
Write only the answer in full against the proper number of the Question and its part, and MCQs question paper must be attached with answer book.
(3) The Code of your question paper must be mentioned in bold letters in the answer book.

Section-A

Multiple Choice Question (MCQs)

Q-01: Choose the correct answer for each from the given option.

(i) **Molecules of matter are always busy in ....motion.**
(a) Never ending random (b) Ceasing random
(c) Never ending regular (d) Ceasing and regular

(ii) **Force of attraction between the molecules is... proportional to the distance between them.**
(a) Inversely (b) Directly (c) Squarely (d) Square root

(iii) **A pair of scissors in an example of a ....**
(a) Pulley (b) Lever (c) Wheel and Axle
(d) Inclined Plane

(iv) **The unit of work is...............**
(a) Watt (b) Joule (c) Newton (d) Kilogram

(v) **Work is done when a body is moved through a distance by a.............**
(a) Fulcrum (b) Inclined plane (c) Mechanical advantage
(d) Force

(vi) **G is called...............**
(a) Gravitational attraction (b) Gravitational constant
(c) Gravitational force (d) Acceleration due to gravity

(vii) **The S.I Unit of force is ....**
(a) Meter (b) Meter/Sec (c) Kilogram (d) Newton

(viii) **The unit of torque in S.I. Unit is ....**
(a) Newton (b) Kilogram (c) Newton meter (d) Meter

(ix) **............is a vector quantity.**
(a) Mass (b) Torque (c) Distance (d) Time

(x) **The fundamental unit of length in S.I unit of measurement is ....**
(a) Kilometer (b) Meter (c) Yard (d) Foot

(xi) **The number of protons in the nucleus called............**
(a) Avogadro Number (b) Atomic Number
(c) Mass Number (d) Nuclear Number

(xii) **Like poles of magnet ....each other.**
(a) Attract (b) Repel
(c) Neither attract nor repel (d) Sometimes attract and sometime repel

(xiii) **The lightest particle in an atom is ....**
(a) Neutron (b) Electron (c) Deuteron (d) Proton

(xiv) **The speed of sound in air at normal temperature and pressure is ....m/s**
(a) 336 (b) 672 (c) 712 (d) 785

(xv) **For total internal reflection the angle of incidence must be ...... the critical angle.**
(a) Greater than (b) Smaller than (c) Equal to (d) Half of

(xvi) **If q = 4cm and p = 2cm, then the magnification of the mirrors is.**
(a) 2 (b) 0.5 (c) 4 (d) None of these

(xvii) **In transverse waves the distance between two consecutive crests of between two consecutive through is called............**
(a) Displacement (b) wave length (c) Velocity (d) Speed

TIME ALLOWED: 2:40 MINUTES MARKS: 68

SECTION – B

NOTE: Answer Any EIGHT of the Following Questions. All Quistions Carry Equal Marks. 40

Q-02: What is Physics? Name some important branches of Physics.
Q-03: Differentiate between mass and weight.
Q-04: Define equilibrium. State the two conditions of equilibrium with examples.
Q-05: What do you know about Brownian Motion?
Q-06: What is meant by anomalous expansion of water? What are the effects of this anomalous expansion of water on every day life?
Q-07: Define Reflection of Light. State the Laws of Reflection.
Q-08: What are the main defects of a human eye? How are they removed?
Q-09: How is rainbow formed?
Q-10: Distinguish between A.C and D.C.
Q-11: Explain in the Law of Heat Exchange.
Q-12: The mass of an electron is 9.11×10^{-31} kg. Convert it in gm, milligram a microgram.
Q-13: Give reasons for the following.
(a) Why does piece of stone sink in water but a huge ship floats?
(b) Why does the flash of lightning seen earlier than the sound of thunder?

SECTION – C

NOTE: Answer Any TWO of the Following Questions. All Quistions Carry Equal Marks. 28

Q-14: (a) Define Momentum. Explain the law of conservation momentum with the help of example.
(b) A truck is moving east ward with a velocity of 15 m/Sec.
Q-15: Explain what is meant by centripetal force. Give three examples of a body moving in a circular path.
Q-16: (a) State the Law of Conservation of Energy and explain this law for a freely falling body.
(b) Calculate the K.E of an object of mass 4kg moving at a speed of 10 m/s.
Data:
Mass = m = 4kg
Velocity = V = 10 m/s
Kinetic Energy = K.E. = ?